

Remarks

Claims 1, 2, 4-8, 11-19 and 21-24 are pending.

Claims 1, 2, 4-8, 11-19 and 21-24 are rejected on the ground of non-statutory obviousness-type double patenting over US Pat 7,291,216 and provisionally rejected on the ground of non-statutory obviousness-type double patenting over US Appl. No. 10/531,483.

A terminal disclaimer over US Pat 7,291,216 and a terminal disclaimer over US Appl. No. 10/531,483 are attached. Applicants therefore respectfully request that the obviousness-type double patenting rejections be withdrawn.

Claims 1, 8 and 11 are rejected under 35 USC 103(a) as obvious over US 5,858,078 which discloses calcining a titanium dioxide platelet.

Applicants respectfully traverse the rejections.

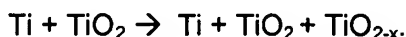
The instant claims are drawn, in part, to a platelet-shaped pigment obtained by calcining a TiO₂ coated Ti, Zr, Cr, or Zn platelet in a non-oxidizing atmosphere at a temperature of more than 600°C. When TiO₂ coated Ti is instantly calcined, Ti is a titanium metal, not a Ti oxide, instant specification, page 1 line 2.

US 5,858,078 provides platelet shaped, substrate-free titanium dioxide pigment by solidifying an aqueous solution of a thermally hydrolysable titanium compound on a continuous belt, detaching the resulting layer, coating the resulting titanium dioxide platelets with further titanium dioxide by a wet method followed by drying and calcining the material obtained.

US '078 states that the object of the invention therein is to provide a titanium dioxide luster pigment in rutile or anatase form, col. 3, lines 9-13. The pigment consists of titanium dioxide, col. 3, lines 60-61. The anatase form is present prior to calcination; calcination is explicitly carried out to provide the rutile form, col.3, lines 4-49:

After drying, the titanium dioxide is in the anatase modification. By calcining above 600°C it can be converted without the presence of foreign ions into the rutile form. By this means a highly pure titanium dioxide pigment in the rutile form is obtained ...

The pigment of '078 is quite different from the instant pigment and is obtained using different processing steps. Applicants again respectfully note that the instant calcination step is carried out using TiO₂ coated metal platelet, e.g., a Ti metal platelet coated with TiO₂, which is different from the material that undergoes calcination in '078. Perhaps more important, the instant calcination is carried out in a non-oxidizing atmosphere at a temperature of more than 600°C which results in the following reduction of TiO₂ producing another titanium suboxide species:



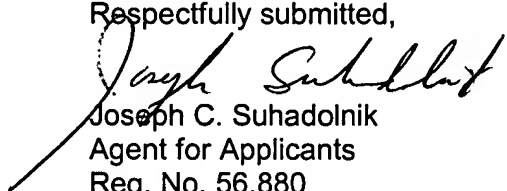
Thus, the pigments are different: '078 consists of rutile TiO₂; the instant pigments have a layer containing a mixture of Ti, TiO₂ and titanium suboxides (TiO_{2-x}). This is the result both of using different a starting substrate for calcination and different, i.e., non-oxidizing, conditions for calcination. Furthermore, there is nothing on '078 that suggests the above reduction reaction can be achieved.

Applicants respectfully submit that the rejections of claims 1, 8 and 11 under 35 USC 103(a) over US 5,858,078 are overcome and kindly ask that the rejections be withdrawn.

Applicants further respectfully submit that all rejections are overcome and kindly ask that they be withdrawn and that claims 1, 2, 4-8, 11-19 and 21-24 be found allowable. In the event that minor amendments will further prosecution, Applicants request that the examiner contact the undersigned representative.

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Attachments: Terminal disclaimer over US Pat 7,291,216

Terminal disclaimer over US Pat Appl. No. 10/531,483